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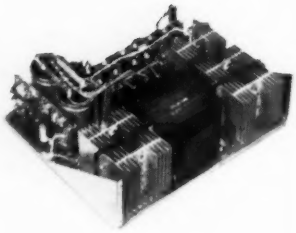

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indexes 1966

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TEC = Test Equipment Classics
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EEE's Second Annual Semiconductor-Device Clinic: Linear Integrated Circuits

For details, see page 135

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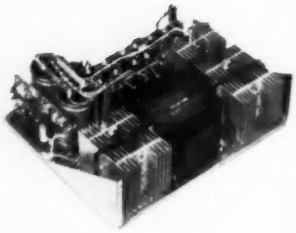

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ACROSS THE Editor's Desk

More dBs. Tack another type of dB onto the long string of reference levels described in our November issue. Joseph Glaab, CATV project manager for Blonder-Tongue, writes:

"I read with interest your Measurement's File article 'On the Trail of the Elusive dB.'

"One reference not mentioned is the dBmV where 0 dBmV= 1 mV across 75 ohms. This is the basic unit used in the 75-ohm cable TV industry, which includes community antenna television and master antenna television. All amplifiers and equipment input and output levels are rated in dBmV; and the field-strength meters have direct dBmV reading scales."

Mr. Glaab's company has a handy conversion chart that translates signal level in μV into dBmV. If you would like a copy, circle **24** on the inquiry card.

Dear EEE:

The industry owes Mr. Herb Roth of Power Designs a vote of thanks for his article, "What's Wrong with Power-Supply Specs?" I think the article would be valid and meaningful if one were to ask, "What's Wrong with Component Specs?" and substitute the word "component" for "power supply" throughout the article.

It is extremely frustrating, costly and time consuming to re-examine returns allegedly "out of spec" only to find that they pass all in-house testing specifications written for that particular component. Mr. Roth is absolutely right, "we don't speak the same language nor mean the same thing with the same words."

I think EEE would do the industry a valuable service if at some future date an entire issue were devoted to specifications. It would be helpful if vendor and vendee alike in important segments of production, design and engineering would contribute their thoughts on specifications and what they should say or should not say.

Abe Kosakowsky, Sales Manager,
Silicon Transistor Corp.,
Garden City, N. Y.

We feel that a single major report on specs in general would have somewhat less direct value than a series of major articles, each devoted to a specific product. It is certainly true that transistor specsmanship, for example, has much in common with power-supply specsmanship. But each product has, in our opinion, too many peculiarities that could not be covered in an all-encompassing report.

What do rEEEders think?

Steinmetz challenges Hertz. There may be a new move afoot to change the designation for the unit of frequency. Some people feel that NBS and all major electronics publications may have missed the boat in adopting a designation honoring the radio-waves pioneer, Heinrich Rudolph Hertz (1857-1894).

They feel the honor rightfully belongs to the pioneering advocate of alternating current, Charles Proteus Steinmetz (1865-1923). Since Charles Proteus worked for General Electric for the last 30 years of his life, GE engineers would, no doubt, be ardent supporters of the move to change the frequency designation from hertz to steinmetz. The abbreviation, of course, would derive from Steinmetz's initials.

Credit Due. The author of "On the Trail of the Elusive dB" (EEE, Nov. 1966) informs us that a good part of the information in his article was derived from material in the Lenkurt Demodulator, published by Lenkurt Electric Co., who should have received appropriate credit.

Engineering students in pursuit of . . . Purdue University has a bit of a problem. It seems that the ratio of guys to gals is 3 to 1 which, combined with a tough curriculum, suggests that the guys spend most of their time studying.

That's what everybody thought until it was revealed that 150 coeds had signed up for a no-credit course in judo, the fine old Japanese art of self-defense.

Perfect defects. Most large electronics and aerospace companies have Zero Defects programs for encouraging meticulous workmanship. Boeing has one, too. And, back in December, a Boeing New Orleans technician, Leonard Payne, received a ZD award for producing perfect defects.

His job was to make bad welds so that engineers could study their strength. He did beautifully. According to the January 1967 issue of "Boeing Magazine": "It is hard to do a consistently bad job of welding. But through perseverance, devotion to duty and superior skill, Payne did the worst welding job ever turned out at Boeing."

Proving an old theorem. Beckman's Larry Bishop, a man of Pythagorean bent, blew into the office the other day with the tale of three Indian ladies who slept, respectively, on a

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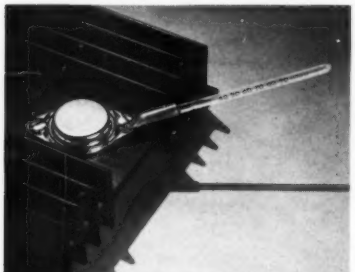
Fast, High-Contrast Scope with Unique Variable Storage (Jan 24) Pr
A Survey of Integrating Digital Voltmeters (Jan 54) TET
Dual-Probe Broadband Meter Gives Gain and Phase (Feb 24) Pr
More to Do With Plug-In Digitals (Feb 28) Pr
The AC VTVM (Feb 47) TEC
A Survey of Phase-Sensitive Voltmeters (Feb 96) TET
The Significant Differences in Products at IEEE (Mar 16) SG
A Survey of X-Y Recorders (Mar 56) TET
Op Amps Set IC Test Conditions (Apr 24) Pr
A Survey of Sampling Oscilloscopes (Apr 56) TET
The Sampling Oscilloscope (Apr 74) TEC
Signal Generators (Apr 76) SG
A Survey of High-Frequency Counters (May 50) TET
Low-Cost IC Tester Gives Operational Checks (Jun 28) Pr
The Frequency Standard (Jun 50) TEC
A Survey of Frequency-Selective Voltmeters (Jun 84) TET
Who Has the Right Time? (Jul 32) Pr
The Portable Meter (Jul 42) TEC
A Survey of Plug-In Spectrum Analyzers (Jul 70) TET
The Significant Differences in Products at WESCON (Aug 18) SG
A Survey of Differential Voltmeters (Aug 70) TET
The Carrier-Frequency Voltmeter (Aug 86) TEC
Scopes Widen Their Scope (Sep 30) Pr
A Survey of Phase Meters (Sep 42) TET
The Electronic Counter (Sep 56) TEC
A Survey of Function Generators (Oct 62) TET
10 K Challenges 1 Ohm (Nov 30) Pr
A Survey of Storage Oscilloscopes (Nov 54) TET
The Phase-Angle Voltmeter (Nov 74) TEC
IC Tester Spans from Slice to Card (Dec 28) Pr
A Survey of Variable Voltage Standards (Dec 44) TET
Electronic Analog Voltmeters (Dec 54) SG

horse hide, a rhinoceros hide and a hippopotamus hide.

Well, it turns out that each was wed and, in due time, each brought forth progeny. The squaw who slept on the skin of a horse bore a son, as did the squaw of the rhinoceros hide. But the third squaw bore twin sons.

This proves again that the squaw of the hippopotamus equals the sons of the squaws of the other two hides.

Say, Ahh. Misplaced Captions Dept. We can't quite trace the source of this caption, but it certainly seems appropriate to Chatterton Research Corp.'s simple approach to checking operating



temperature of power transistors. The company, no doubt hopes that engineers are waiting feverishly to get their hot little hands on these devices.

Return of Sir Lancelot. Fair maid was won by gallant deed in days of yore. In the case of Sir Lancelot, according to Arthurian legend, the gallant deed often took the form of winning a contest against heavy odds.

Well, Lancelot has returned in the form of Donald F. Conviser, a 24-year-old design engineer in the RF and Signal Processing Group of ITT Gilfillan in Los Angeles. Don entered a circuit-design contest sponsored by Vacco Electronics and Radio Products International, who sought unusual applications for the VariZistor, a thin-film resistor that's adjusted by sliding the body along the center lead.

Don submitted a circuit he designed to decrease the crossover distortion in linear complementary-symmetry amplifiers. His circuit is especially useful in op-amp output stages, in linear buffer amplifiers and in direct-coupled audio amplifiers. Well, against heavy odds, Don won first prize, a trip for two (via Delta Air Lines) to Jamaica and five days at the Montego Beach Hotel.

Unwilling to settle for half his prize, Don, a bachelor, had to go for another prize, Bonnie Weiss, a schoolteacher of Granada Hills, Calif. He won again. Don and Bonnie will spend their honeymoon in Jamaica in June.

Standards for nonstandard standards. The frequency with which we read such phrases as "the size of a pinhead," "no bigger than a paper clip," "the size of a cube of sugar" and similar phrases makes it clear that some sort of standardization is necessary for the benefit of all engineers. While we will leave the task of providing traceable primary standards to NBS, we offer the following list of conversion factors for interim use.

Linear Measure

2.345 linear pinheads = 1 linear matchhead
4.52 linear matchheads = 1 linear paper clip
2.73 paper clip lengths = 1 king-size cigarette

Area

6.345 sq. pinheads = 1 sq. matchhead
212 sq. matchheads = 1 sq. matchbook
50.5 sq. matchbooks = 1 sq. breadbox

Volume

14.65 cu pinheads = 1 cu matchhead
703 cu matchheads = 1 cu matchbook
267.4 cu matchbooks = 1 breadbox

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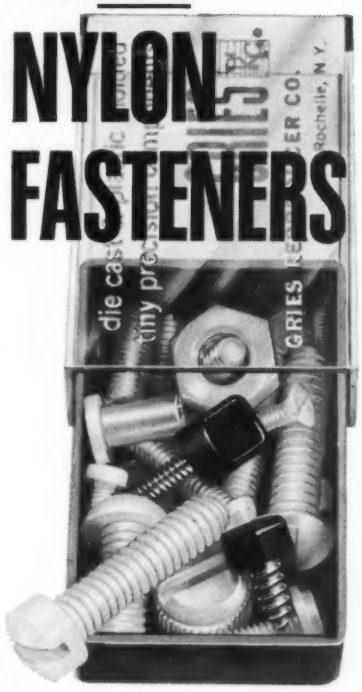

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